

CLAIMS:

- 1 Variable focus lens package (1, 2, 3) comprising a plurality of optical elements in a light path, which plurality of optical elements comprises:
- a fluid optical element in a fluid chamber comprising a first fluid (87) and a second fluid (86), which are non-miscible, and which are in contact over a meniscus (88),
- 5 wherein a shape of the meniscus (88) is variable under the application of a voltage to an electrically conducting surface of the fluid chamber;
- a non-fluid optical component,
- of which fluid optical element and which non-fluid optical element at least one is a lens, wherein the non-fluid optical component is constructed from a substrate that comprises a transparent portion in the light path, and from a moulded surface layer that is present at a side
- 10 of the substrate facing away from the fluid optical element and further comprises alignment means for alignment of the lens package with further lenses.
2. A variable focus lens package as claimed in Claim 1, characterized in that a
- 15 second non-fluid optical component is present in the light path in addition to the —first— non-fluid optical component, such that the fluid lens is sandwiched between the first and the second non-fluid optical component, which second non-fluid optical component is constructed from a substrate that comprises a transparent portion in the light path, and a moulded surface layer that is present at an outside of the encapsulation and further comprises
- 20 alignment means for alignment of the lens package with further lenses.
3. A variable focus lens package as claimed in Claim 1, wherein the substrate and a further carrier forming part of the encapsulation comprise alignment means for mutual alignment.
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4. A variable focus lens package as claimed in Claim 1 or 2, wherein the alignment means comprise a ring-shaped protrusion or cavity circumfering the light path.

5. A variable focus lens package as claimed in Claim 1 or 2, further comprising a moulded layer of a cross-linked polymer material with a lens function at an inner side of the encapsulation of the fluid chamber.
- 5 6. A variable focus lens package as claimed in Claim 5, wherein said lens function at the inner side of the encapsulation functions as a grating.
7. A variable focus lens package as claimed in Claim 1, wherein said non-fluid optical component is an aspheric lens.
- 10 8. An assembly of a variable focus lens package according to any of the preceding claims and a further lens, wherein the variable focus lens and the further lens are aligned to each other with the alignment means present in the moulded surface layer of the variable focus lens.
- 15 9. A camera module comprising an image sensor, a driver and a variable focus lens package according any of the preceding claims.
10. An imaging apparatus provided with a variable focus lens package according
20 any of the preceding claims.
11. A method of manufacturing a variable focus lens package comprising a plurality of optical elements in a light path, which plurality of elements comprises:
- a fluid optical element in a fluid chamber comprising a first fluid (87) and a
25 second fluid (86), which are non-miscible, and which are in contact over a meniscus (88), wherein a shape of the meniscus (88) is variable under the application of a voltage to an electrically conducting surface of the fluid chamber;
 - a non-fluid optical element,
of which fluid and non-fluid optical element at least one is a lens,
- 30 in which method a plurality of such packages are made simultaneously with the steps of:
- assembling a carrier comprising a plurality of cavities filled with at least one of said fluids to a substrate with transparent portions for each of the light paths, which substrate has a moulded surface layer that includes the non-fluid lens and alignment means for alignment with further lenses, and

- separating said plurality of lenses into individual variable focus lenses packages.